

Appl. No. 10/812,248  
Response to Office action mailed May 9, 2006

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1 (previously presented). A method of producing an integrated transgene in an avian cell comprising:

introducing a nucleic acid comprising a non-lethal marker gene into an avian cell by electroporating; and

allowing the cell to undergo a cellular division;  
thereby producing an integrated transgene in an avian cell.

2 (previously presented). The method of claim 1 comprising allowing the cell to undergo a division in the presence of chick embryo extract.

3 (previously presented). The method of claim 1 wherein the transgene is stably integrated.

4 (previously presented). The method of claim 1 wherein the marker gene is a fluorescent expression marker.

5 (previously presented). The method of claim 1 wherein the marker is a fluorescent protein expression marker.

6 (currently amended). The method of claim 1 wherein the marker is ~~an~~ a green fluorescent protein expression marker.

7 (previously presented). The method of claim 1 wherein the marker is an antibiotic resistance gene.

8 (previously presented). The method of claim 1 wherein the marker is puromycin resistance.

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9 (previously presented). The method of claim 1 wherein the avian cell is a blastodermal cell.

10 (previously presented). The method of claim 1 wherein the electroporating introduces a double stranded break in a nucleic acid.

11-32 (canceled).

33 (new). A method of producing an integrated transgene in a totipotent avian cell comprising:

introducing a nucleic acid comprising a non-lethal marker gene into an avian cell by electroporating; and

allowing the cell to undergo a cellular division;  
thereby producing an integrated transgene in a totipotent avian cell.

34 (new). The method of claim 33 comprising allowing the cell to undergo a division in the presence of chick embryo extract.

35 (new). The method of claim 33 wherein the transgene is stably integrated.

36 (new). The method of claim 33 wherein the marker gene is a fluorescent expression marker.

37 (new). The method of claim 33 wherein the marker is a fluorescent protein expression marker.

38 (new). The method of claim 33 wherein the marker is a green fluorescent protein expression marker.

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39 (new). The method of claim 33 wherein the marker is an antibiotic resistance gene.

40 (new). The method of claim 33 wherein the marker is puromycin resistance.

41 (new). The method of claim 33 wherein the avian cell is a blastodermal cell.

42 (new). The method of claim 33 wherein the electroporating introduces a double stranded break in a nucleic acid.